

Centre-commissioned external review of ILRI's capacity strengthening strategy, role and activities

First Report 12 November 2004

Final Report 18 January 2005

CCER Panel

Anthony Youdeowei, Abidjan, Cote d'Ivoire

Datta Rangnekar, Amedabad, India

Jon Danne, Wageningen, The Netherlands

Table of Contents

Acronyms and Abbreviations

1 Introduction

2. Acknowledgments

3. Observations and Findings

4. Benefits and Limitations of Current ILRI Cast Programmes

5. ILRI's New Strategy and Cast Activities

6. Opportunities for Partnerships in Capacity Strengthening

7. Recommendations

8. Implementation Process for Recommendations

9. Annexes

Acronyms and Abbreviations

AAU	Addis Ababa University
ACIAR	Australian Center for International Agricultural Research
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AU	African Union
BAIF	Bharatiya Agro-industries Foundation, India
BASIC	Building African Scientific and Institutional Capacity; FARA project
BECA	Biosciences Eastern and Central Africa
CAADP	Comprehensive Africa Agriculture Development Programme
CaSt	Capacity Strengthening
CCER	Center Commissioned External Review of ILRI
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Centre for Tropical Agriculture Colombia
CORAF/WE CARD	Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles
CSO	Civil Society Organization
COMESA	Common market of Eastern and Southern Africa
DFID	Department for International Development, UK
FARA	Forum for Agricultural Research in Africa
FBO	Farmer Based Organizations
GFAR	Global Forum for Agricultural Research
GIS	Geographical Information Systems
GO-AFU	Global Open Agriculture and Food University of the CGIAR
GO	Government Organizations
ICAR	India Council for Agricultural Research
ICRA	International Centre for development oriented Research in Agriculture
ICT	Information and Communications Technology
IFPRI	International Food Policy Research Institute
IKS	Indigenous Knowledge Systems
ILCA	International Livestock Center for Africa
ILRAD	International Laboratory for Research into Animal Diseases
ILRI	International Livestock Research Institute
INRM	Integrated Natural Resources Management
ISNAR	International Service for National Agricultural Research
IWMI	International Water Management Institute
MOU	Memorandum of Understanding
MSc	Master of Science
MTP	Medium Term Plan
NARES	National Agricultural Research and Extension Systems
NARI	National Agricultural Research Institute
NARS	National Agricultural Research Systems
NEPAD	New Partnership for Africa's Development
NCAP	National Center for Agricultural Economics and Policy Research India
NDDB	National Dairy Development Board of India

NGO	Non-Governmental Organization
PhD	Doctor of Philosophy
RAIN	Regional Agricultural Information Network
REC	Regional Economic Community
SRO	Sub-regional Organization>
SSA	Sub-Saharan Africa
SSA-CP	Sub-Saharan Africa Challenge Programme of FARA
TOR	Terms of Reference
WUR	Wageningen University and Research centre

1 Introduction

1.1 Background to this review

The year 2002 marked the emergence of a new phase for the International Livestock Research Institute (ILRI), when it defined its new research strategy to focus on research that would show significant impact on poverty reduction, using livestock as one of the pathways out of poverty.

ILRI's research strategy to 2010 defines ILRI's goal as follows,

“By positioning itself at the crossroads of livestock and poverty and by bringing to bear high quality science and capacity building, ILRI and its partners will reduce poverty and make sustainable development possible for poor livestock keepers, their families and the communities in which they live”.

Thus one of the major guiding principles in the planning of ILRI's new research agenda is “to strengthen the capacity of ILRI and its partners to contribute to identified research themes. This will extend beyond running courses and training students to innovative training activities and research partnerships. ”This implies that ILRI's changing research paradigm will effectively address the issues of poverty reduction and achievement of sustainable livelihoods for the livestock-dependent poor in sub-Saharan Africa and south Asia. So, the main focus in the new strategy is to ‘ensure that ILRI's research is directed towards reducing poverty’. In this new strategy, ILRI will primarily focus its efforts towards sub-Saharan Africa and South Asia, where a large number of rural families depend on livestock as their source of livelihood.

Analyzing the poverty situation and role of livestock in the livelihoods of the poor, ILRI identified three pathways out of poverty on which it can act, namely:

- securing the current and future assets of the poor
- improving the productivity of agricultural systems of the poor in a sustainable manner and
- encouraging participation of the poor in livestock related markets.

Success in achieving the ILRI goal will depend largely on strengthening the institutional and individual capacities of ILRI and a range of key partners who share the same vision.

We note that the Center Commissioned External Review (CCER) of ILRI's Facilities in Ethiopia (see ILRI 2002) drew special attention to the growing interest in capacity development for the Africa region and the need to focus attention on supporting existing professionals who are unable to adequately organize and deliver the latest science, in addition to developing the next generation of science professionals.

Since its inception, the capacity building and strengthening efforts of ILRI and its predecessors, The International Laboratory for Research into Animal Diseases (ILRAD) and The International Livestock Research for Africa (ILCA), have contributed significantly to human and institutional development in sub-Saharan Africa and in the developing world. But declining core funding has resulted in changes in the nature and scope of capacity strengthening activities which are now integrated into donor-restricted research project funding.

In the light of the vision and mission reflected in ILRI's new research and development strategy of *"Livestock, a pathway out of poverty"* and the current international efforts in promoting the concept of research for development, it is now vital to review ILRI's capacity strengthening (CaSt) strategy and activities in sub-Saharan Africa and South Asia. The outcome of such a review will help to chart the course of ILRI's innovative capacity strengthening activities in the context of the institutional change and research processes in support of livestock-mediated poverty reduction.

A three-member review team (see annex 2) was commissioned to review ILRI's capacity strengthening strategy, role and activities. The observations, findings and recommendations of the review team are presented in this report.

1.2 Terms of Reference

The terms of reference for this review were designed to address 4 major aspects namely,

- analysis of the evolution of ILRI's capacity building activities
- required changes in ILRI's capacity strengthening role to make it consistent with ILRI's mandate and revised strategy.
- identification of a set of guiding principles and methods for innovative capacity strengthening activities in support of livestock-mediated poverty reduction and
- an approach to implement the proposed new capacity strengthening strategies

The detailed terms of reference for this review are presented in annex 3.

Two members of the review panel, Anthony Youdeowei and Datta Rangnekar were involved in all the CCER activities, while Jon Daane participated in the initial consultation at ILRI in Addis Ababa and subsequently contributed extensively to the exercise through a series of teleconferences, emails as well as critical reviews of the draft reports.

This review was conducted in two phases. Phase one consisted of the participation by two review members at the Building African Scientific and Institutional Capacity (BASIC) workshop organized by the Forum for Agricultural Research in Africa (FARA) from 6 to 8 September at the Commission of the African Union in Addis Ababa. The objective of attendance at this workshop was to provide panel members the opportunity to interact with participants at this BASIC workshop and to gain relevant information about proposed

collaborative capacity building/strengthening initiatives to improve training in agricultural research for development in Africa. Following this workshop, the panel members participated in a one day expert consultation and brain storming session at ILRI to discuss and finalize the Terms of Reference (TOR) for the review, using some of the lessons learned from the BASIC workshop. The second phase was conducted from October 3 to 16 October, mostly in Addis Ababa including a 2 day visit to ILRI headquarters in Nairobi.

Our approach to gathering information was mainly through individual and group interviews and discussions with ILRI scientific staff and management at the Addis Ababa campus and in Nairobi, as well as at the Debre Zeit station. Information was also obtained from documentation and review reports provided by ILRI (see annex 1) and those downloaded from the ILRI website (see annex 7). In addition, we interviewed and discussed with a wide range of ILRI's national agricultural research system partners, individual beneficiaries of ILRI postgraduate training, collaborating universities staff, other Future Harvest CGIAR centers with activities based at ILRI, as well as other agricultural training institutions in Ethiopia, Kenya, Uganda and Mali (see annex 4). The panel also had the opportunity to discuss and interact with the CCER team on Biometrics in Nairobi. In adopting a participatory and transparent approach to this assignment, we hoped that the review benefited from the opinions of all parties concerned with ILRI's programmes and interests. We also validated our impressions from the discussions. A draft report was shared with ILRI management and a broad range of stakeholders for review and comments in order to obtain inputs to our conclusions and recommendations, but without in any way, compromising our findings and opinions.

2. Acknowledgments

In conducting this review, the panel received considerable assistance from several persons to whom we are deeply grateful. We are unable to mention all of them here but certain persons deserve special mention. First, we are grateful to Dr Carlos Sere, Director General of ILRI and ILRI management for the opportunity to conduct this review. Dr John McDermott, Deputy Director General (Research) ILRI and Bruce Scott, Director Partnerships and Communications, provided valuable technical information while Dr Jeroen Dijkman, Director Theme 2, who coordinated the entire CCER review, provided the panel with considerable technical guidance, and ensured that the necessary logistic support was provided throughout our mission in Addis Ababa and in Nairobi. Jeroen also critically reviewed the draft reports and provided very useful comments. We gratefully acknowledge the assistance received from Dr. Yilma Jobre, Manager of the CaSt Programme, who spent considerable time organizing our mission, providing relevant documents and discussing technical issues with us. Mekdim Ketsela and Tigist Mamo at ILRI Addis Ababa, and Veyril Adell at ILRI Nairobi, excellently organized our visits and took care of our administrative needs. Finally, we are deeply grateful to all the ILRI scientists and other scientists of the Consultative Group on International Agricultural Research (CGIAR) centres, national agricultural research systems (NARS) partners, and ILRI graduate students who spent considerable time discussing with us during our missions in Addis Ababa and Nairobi.

3. Observations and Findings

3.1 Evolution of ILRI's capacity strengthening activities

The training programmes of ILRI are designed to build and strengthen capacities in scientific and technical knowledge and skills for NARS scientists and technicians in developing countries. Thus, past ILRI CaSt activities were focused mainly on individual higher degree (MSc and PhD) training for postgraduate students, primarily from Ethiopia and Kenya (i.e. the countries where ILRI is situated and where its predecessors, ILCA and ILRAD, were headquartered). Training consists of three main categories, namely (i) degree training for graduate fellows (ii) non-degree training for research fellows, student associates, technical associates and (ii) attachment associates and group training for scientific and technical staff from the national agricultural research systems of developing countries. Group training courses offered are categorized into core courses, programme courses and network courses; they are usually of short duration with course contents, which include laboratory and field components in a variety of subjects. Over the past 20 years, about 135 short courses have been conducted on topics which are mainly technical although some were policy related (see for example annex 5, table 5.4).

A training policy and procedures manual has been published to guide the efficient management of ILRI's training programme. An excellent range of high quality training and teaching resources materials in hard copies and electronic formats, that have been developed from these course (see annex 7) are available for use by students, scientists, technicians, agricultural training institutions and trainers in developing countries.

In January 2002, the results of an in-house evaluation of the impact of ILRI's graduate fellowship programme was published; this report describes the tools used as a bench mark for similar studies.

Between 1990 and 2004, 186 PhD, 126 MSc and 437 attachments / student / technical associates as well as 610 participants in group training courses, benefited from ILRI's capacity strengthening activities which involved a total of 1359 persons including 376 women. ILRI's training programmes continue to make significant contributions to building national capacities in research and development of livestock science in Africa and other developing countries (see data in annex 5, tables 5.1– 5.4)

3.2 Observations from discussions on ILRI capacity strengthening activities with NARS scientists, graduate students and academic staff of partner universities as well as with ILRI and other CGIAR scientists.

Discussions were held with scientists and students from various NARS and African universities who have benefited from training and other facilities of ILRI in order to obtain their views, experiences and suggestions for future directions of the capacity strengthening activities of ILRI. Some of the discussions were held with partner universities and research organizations in Ethiopia and Kenya as well as through teleconferencing with those from other African countries. Similar discussions were also held with some senior ILRI scientists at Addis Ababa and Nairobi and graduate trainees working at these two campuses. We also had the opportunity to meet with scientists from other CGIAR Centers posted at ILRI and noted their views on capacity strengthening. Salient observations from these discussions on different aspects of capacity strengthening are summarized below.

3.2.1 Observations from discussions with NARS partners

- All the organizations/individuals whom we met were appreciative of the opportunity they had to work in ILRI. They received high levels of cooperation and guidance from scientists, worked under very conducive ILRI research environments with excellent laboratory and library facilities that are made available to them.
- Attachment of trainees for research work or training in specific skills is mostly through personal contacts and in a few cases, through a formal process. Sometimes ILRI advertises or approaches universities for candidates, according to its needs, and ILRI scientists select candidates out of those recommended by the universities.
- Most of the training programmes carried out are of technical nature and project driven; very few are need-based or related to livelihood issues or poverty reduction.
- Students or attached scientists do not appear to have much choice to work on topics of their interest.
- In some instances, ILRI has extended laboratory facilities to NARS scientists and students for carrying out specialized work which they could not undertake at their organizations.
- Although many students/scientists attached to research projects of ILRI are registered for postgraduate degrees with universities, the involvement of university teachers in planning and follow-up of the work is minimal. Thus the university teachers miss the opportunity of strengthening their personal and institutional capacities for planning and implementation of high quality livestock research.
- Except for a few, most Universities and national agricultural research institutes (NARI) interviewed have not carried out needs assessment for strengthening their research capacities and no formal discussions were held with ILRI about planning research according to needs. Most of the professors agreed that there is need to assess the capacity strengthening requirements and plan training accordingly, more so in view of pressure from national Governments to upscale output of specialists from the universities. Professors also indicated that there is pressure to undertake livestock research in such a manner that the output is beneficial to small holder resource-poor farmers.
- In view of the above, the need was expressed to train university teaching and research staff to upgrade their knowledge and research skills to enable them to effectively plan research to benefit the resource poor and improve rural livelihoods.
- Some of the Universities and NARI do not have well established and appropriate linkages or formal MOUs with ILRI for training and research. Even where such arrangements exist, most of the university and NARI staff are not well informed about such arrangements and therefore they are unable to take full advantage of ILRI's facilities.

3.2.2 Observations from discussions with ILRI scientists reveal that:

- ILRI scientists are generally satisfied with the type of training programmes conducted and there is realization that ILRI should and can make significant contribution towards capacity strengthening of NARS
- they feel it is difficult to make changes in the nature, contents and duration of the training programmes in view of limitations of manpower, time and funding support.
- scientists fully realize that planning of training programmes with the objective of strengthening NARS based on discussions with different NARS partners is desirable and this would require continuous dialogue with them.

- it will be valuable to establish a process of interaction with a wide range of actors from the public, private and tertiary agricultural education and training sector to ensure that NARS have the appropriate capacities and skills to respond to the needs of different stakeholders in the livestock development sector.
- there has been very little planning effort put into CaSt activities.
- there is lack of policy guidance and defined targets for CaSt
- there is lack of clarity about an appropriate approach and activities of CaSt in relation to the new strategy and goal of ILRI. However, a few scientists have a good understanding in this regard and feel that CaSt activities can be suitably modified by developing collaborative projects related to sustainable livelihoods.
- there are a few projects that are need-based, multidisciplinary, development supporting and promote interaction with local research and development organizations; these offer additional scope for desired capacity strengthening. Such projects could be used as key entry points in a new CaSt strategy.
- institutional changes could occur through the engagement of ILRI with NARS scientists in new innovation systems approaches to research, and pattern of implementation to reduce livestock-mediated poverty.

3.2.3 Observations from discussions with scientists from other CGIAR centres based at ILRI, Addis Ababa

Discussions were held with a few scientists from IWMI, ISNAR/IFPRI and CIAT about their interaction with ILRI scientists, involvement in research projects and their perceptions about capacity strengthening activities of CGIAR Centers in general. The observations from these discussions are summarized below:

- All the scientists of the CGIAR Centres consider capacity strengthening important.
- IWMI has developed policy guidelines for incorporating capacity strengthening activities in all of its research projects. This policy (reproduced in annex 6,)can be a suitable framework for developing CaSt policy guidelines for ILRI.
- ISNAR scientists are keen to interact with ILRI scientists and through the series of training modules they have developed, they can assist ILRI with capacity strengthening – particularly in relation to socio-economic aspects, environmental and gender issues, and participatory approaches.
- CIAT scientists with livestock background and experience in participatory approaches located at ILRI in Addis Ababa could appropriately complement these approaches already adopted by ILRI's scientists and CaSt activities which are integrated into the research themes.

All national scientists, current and past graduate fellows interviewed emphasized the usefulness of ILRI's individual CaSt activities for their research and professional development. Furthermore, co-supervisors from national universities of MSc and PhD students have had only limited involvement in the studies and so they have not benefited optimally through strengthening their individual research capacities and the institutional capacities of their universities.

National universities and research organizations consider that ILRI should continue to play an important role in building the scientific capacity of their staff through individual higher degree studies and collaborative research programmes. Our discussions with teaching staff at representative universities in Kenya , Ethiopia and Tanzania as well as with researchers in Uganda and Mali, point to an increasing demand from NARIs and universities for MSc and PhD

places at ILRI. For example, the government of Ethiopia has challenged the authorities of the Addis Ababa University (AAU) to increase its postgraduate intake to train scientific staff for the academic departments of the university and other higher agricultural training institutions as well as for the national agricultural research system. Over the next 5 years, postgraduate intake in the department of biology is expected to rise to over 130 students per year, and AAU is relying on ILRI to assist with postgraduate supervision in this ambitious human resources development programme. We doubt whether ILRI can afford the time and resources to respond adequately to such demands from NARS partners. The panel feels strongly that building national scientific capacity is the pivotal role of the universities and a stronger emphasis needs to be placed on developing their own capacity to contribute to this. We suggest therefore that ILRI should move towards focusing its CaSt strategy more on building capacity to build capacity, through institutional strengthening rather than on capacity strengthening *per se*.

4. Benefits and Limitations of Current ILRI CaSt Programmes

Through its CaSt activities over the past years, ILRI has accumulated considerable experience in individual capacity strengthening involving research participation of NARS scientists and technicians as well as university staff in ILRI projects.

ILRI's short-term training programmes have provided opportunities which enabled several scientists and technicians from Africa and other developing countries to acquire new laboratory techniques and use sophisticated equipment and thus created a pool of well trained national and international scientists and technicians for work on livestock research and development. These scientists also improved their knowledge and skills in modern information management.

The long-term training programme thus assisted NARS to obtain a critical mass of livestock research scientists which would otherwise be difficult to achieve from national resources. These scientists have, to a limited extent, proceeded to establish some levels of national livestock research and development programmes in their countries, promoted sharing and dissemination of information on livestock research and development through national and regional networking. ILRI's research scientists and information management specialists participated fully in the long-term training programmes, through providing excellent research supervision and good guidance for higher degree work. Through these efforts ILRI has contributed to the development, promotion and expansion of livestock research and development in Africa and other developing countries.

Furthermore, ILRI has also successfully established functional working relationships with NARS partners in Africa. In the light of recent changes in agricultural and rural development demands, especially from NARS and the international development community, and the needs/opportunities to engage in new partnerships, the panel commends ILRI in its efforts to chart a new strategic direction for its CaSt activities and applying an innovation systems approach to make livestock research more relevant to sustainable improvements to the livelihoods of resource poor farmers in Africa and South Asia.

However, the panel considers the following as the major the limitations of ILRI's training programmes

- Majority of the training programmes were not directly related to the needs of the NARS programmes. Rather, most of the training programmes are based entirely on ILRI's approved research projects. The effect of this bias for ILRI's research programme focus in training has tended to limit the impact of ILRI's CaSt activities on livestock development in the region.
- ILRI training is mostly of a technical nature for skills development. In many cases, the skills acquired could not be maximally used in the institutions of trainees because of lack of equipment and maintenance facilities there.
- Young scientists who are accepted to work for higher degrees at ILRI do not have the freedom to choose research topics that are related to on-going NARS research programmes, they are compelled to work on topics within ILRI's research agenda which may have limited usefulness to national programmes.
- Research supervisors nominated from universities where ILRI trainees are registered for higher degrees have marginal involvement in planning and conduct of the research as well as follow up of the work of trainees. University staff therefore miss the opportunity of

deeper interaction with ILRI scientists and further strengthening of their own capacities for livestock research planning and implementation.

- Most developing countries in Africa and elsewhere now need research that would support sustainable improvements in livestock productivity to benefit the resource poor (by improving livelihoods). However, ILRI's current training programmes do not include courses that would strengthen the capacity of NARS for planning and conduct of such research.

5. ILRI's New Strategy and Cast Activities

ILRI's new livestock research and development strategy now calls for the joint development of the capacities of a broader range of partners or stakeholders, including GOs and NGOs, CSOs, farmers' organizations, private sector agencies, and consumers. Adopting this new approach will require that both ILRI as an institution and its scientists strengthen their capacities to work in effective partnerships and mutual learning mode. If ILRI can successfully establish such partnerships and achieve this mind-shift, it will make a significant contribution to CaSt partnerships where its comparative advantage lies in its ability and willingness to bring in the technical strength of its research team and facilities into such mutual learning contexts. ILRI should aim to be a valuable partner and should build effective CaSt partnerships with other organizations which bring complementary advantages in terms of process facilitation and mutual learning, without attempting to cover all aspects of CaSt activities related to innovation systems to enhance rural livelihoods.

ILRI's comparative advantage to successfully develop this broader collaborative capacity lies in the existence of excellent research laboratories and facilities for post-graduate training, a well developed and advanced ICT unit and a wide range of high quality training and resource materials developed over several years of capacity strengthening activities. This model can form the basis for developing partnerships for capacity strengthening with research institutions and organizations in South Asia and other parts of the world. Furthermore, the new research paradigm and innovation systems approach to address sustainable livelihoods and livestock-mediated poverty reduction provides a framework for effective collaboration with and capacity strengthening of a new range of ILRI partners.

However, the current absence of a specific ILRI CaSt policy and strategy, and the limited numbers of scientific staff available to cope with increasing demands for graduate training and expectations from NARS partners, could strongly limit the scope and agenda of such efforts to meet the expectations of ILRI and its partners.

5.1 ILRI's new vision and strategy for sustainable livelihoods

To operationalize the concept of pathways out of poverty, ILRI has organized its research efforts around five multi-disciplinary themes as follows:

Theme 1: Supporting policy-making and priority setting for livestock research and development: current and future roles of livestock in poverty reduction

Theme 2: Enabling access to innovation: adapting and delivering technology and information.

Theme 3: Improving market access : opportunities and threats from globalization and the livestock revolution

Theme 4: Securing assets: better livelihoods through the application of biotechnology.

Theme 5: Sustaining lands and livelihoods: improved human and environmental health.

As earlier indicated in the introduction, ILRI's Strategy to 2010 and Medium Term Plan 2005-2007 clearly recognize that the agenda and goals are large, therefore its research paradigm and

portfolio have to change. The documents state that *'It must therefore work with many and diverse partners to accomplish its goals. Through participatory research with poor farmers, ILRI will learn from their traditional skills and knowledge and incorporate this information into its recommended technologies, innovations and policies.'*

A set of 'guiding principles' for planning implementation of its new research agenda are indicated in the 'ILRI's Strategy to 2010' document. Some of the guiding principles which have a direct bearing on changes in the approach to research and capacity strengthening are :

- focusing on and targeting mixed crop–livestock systems
- placing emphasis on livestock species kept by poor livestock producers.
- Incorporating gender analysis in research activities to identify needs of livestock-dependent poor women
- strengthening participatory approaches to research activities and ensuring that research is an integral part of a larger dynamic whole dedicated to improving the livelihoods of the poor.
- strengthening the capacity of ILRI and its partners to contribute to the identified research themes. This will extend beyond running courses and training students to innovative training activities and research partnerships.

Besides the Strategy to 2010, the Medium Term Plan emphasizes the need for capacity strengthening activities to be framed in such a manner as to relate with the institutional change and change in research paradigm.

Thus these documents clearly indicate that ILRI's capacity strengthening efforts have to extend well beyond individual and group training in technical aspects to address need-based innovative training activities and research partnerships. Accordingly, ILRI has to change the way it conducts its research business to ensure maximum impact on poverty, implying the adoption of an explicit strategy that targets poverty, an innovation systems research approach that ensures full stakeholders involvement and focus on markets and market access. This shift in research paradigm also implies a whole series of changes in approach, planning and management of research as well as in attitude (see box 1).

In addition to bringing about these changes, there is a simultaneous requirement to develop capacity strengthening within ILRI so that the institute can effectively manage its livestock research and development process to achieve the new goals set for itself and its partners. This should be an important activity in the agenda of a more robust CaSt Unit of ILRI.

Furthermore, it is essential to promote the appreciation and common understanding of the implications of development/livelihood issues in research and the concept of need-based capacity strengthening amongst the ILRI research team and its partners.

Box 1. Changes in approach to planning and management of livestock research

- From academic research to development research
- From commodity and reductionist approach to whole farm & systems approach
- From technology transfer to innovation systems approach.
- From mono-disciplinary to multi-disciplinary research, with cutting edge science

complemented with soft sciences such as innovation systems analysis, institutional change and learning, and socio-economics.

- From planning and evaluation based entirely on scientist's perception to mix of scientist and farmer perception, incorporating gender issues.

Due to diminishing core funding for CaSt, individual MSc and PhD studies are more and more project driven by the research themes in the selection of topics on which the students work. Capacity strengthening activities are clearly outlined in the log frame developed in the MTP for each of the research themes (*see text table 1*) and some of the five new research themes already have research students working on research theme topics. The concept of integrating capacity strengthening activities within research themes has merit in the sense that the research conducted by students contributes significantly to achieving the goals of ILRI's research themes. However, there is no clear ILRI policy and strategy for CaSt activities to be integrated in the five themes and to meet the increasing demands from universities and NARS for training of academic staff, researchers and professionals.

The new ILRI strategy "Livestock, a pathway out of poverty" places emphasis on the role of livestock in economic growth, poverty reduction, securing assets, innovation systems, market access, integrated natural resources management, (INRM), and human as well as environmental health. This implies a paradigm change that requires new knowledge, skills and mindsets (social sciences, innovation systems approaches and soft skills). The innovation systems approach involves effective supply of new knowledge and technologies not only from the public research system, but also from other sources such as indigenous knowledge systems (IKS), private sector research and transfers from abroad. Successful innovation systems require the integration of research and education systems, developing public-private partnerships, strengthening organizational mechanisms, establishing knowledge transfer mechanisms, building decentralized regional innovation centers and implementing new governance models for research and extension. This innovation systems concept is still rather new to many senior research scientists in ILRI and the concept and its implications are so far not really very clear. We expect that this can only change when the research portfolio of ILRI progressively moves towards new research programmes and projects that (in order to get approved and funded) need to reflect the new strategy and the new paradigm.

From the ILRI 2010 strategy and the MTP 2005-07, it is neither clear what exactly is meant by capacity building or strengthening (what capacities will be strengthened, whose capacity (which individuals and institutions), for what purpose, which CaSt activities and mechanisms, are envisaged nor the expected impact of CaSt activities). If we distinguish individual capacity strengthening (MSc, PhD, visiting scientists) and short group training courses, our impression is that individual capacity building is regarded as an inherent spin-off of participation of the individuals in ILRI's research projects. This is undoubtedly true when it concerns the capacity of these individuals, but while this seems an automatically assumed effect, it is not clear to what extent and how the individual capacities of these NARI and university staff lead to enhanced institutional capacities to engage in more relevant, effective and efficient research and training for livestock-mediated poverty reduction. The same is true for the short courses, which are mainly intended to transfer knowledge on methods and technologies developed through ILRI-research, to NARS and development agencies (ref. Paragraph 3.2 for observations on capacity strengthening)

So the issue is how ILRI wishes to perceive its CaSt function: as a spin-off of participation by individuals in research activities (leaving it to these individuals and their institutions to decide if what they learned is relevant and what to do with this) or does ILRI wish to play a more pro-active and strategic role in which CaSt is not a spin-off of researcher participation, but an activity in its own right, with its own strategic objectives, like the example of IWMI (see annex 5 obtained from the IWMI website) that has a clearly defined capacity building policy and strategy. By adopting a pro-active role and strategy for CaSt, ILRI would be better able to strengthen the research capacities of its partners to engage in more effective and productive collaborative programmes to address livestock-mediated poverty reduction in a sustainable way.

How then can ILRI successfully organize its CaSt activities to achieve the maximum possible impact on strengthening capacities for live-stock mediated poverty reduction?. The panel recognizes that ILRI is an international research organization, but ILRI's goal in the 2010 strategy elevates capacity strengthening, together with the delivery of high-quality science, as its two main thrusts. However, only limited reference is further made to CaSt in the strategy document. If ILRI decides to go beyond the "spin-off CaSt mode", the CaSt Unit needs to place greater emphasis on engaging with national and regional educational , research and development partners, and identifying the type of capacities that will be strengthened, how this contributes to the desired impacts to achieve a multiplier effect, and how it will "build capacity to build capacities."

Text Table1. ILRI's Capacity strengthening activities as outlined in the ILRI MTP 2005–2007.

Source : ILRI's Medium-Term Plan 2005 - 2007

<i>Research Theme</i>	<i>Hierarchy of activities/objectives</i>	<i>Indicators of achievements</i>
1. Supporting policy-making and priority-setting for livestock research and development	Strengthen capacity of development partners on aspects of poverty analysis and mapping.	20 Kenyan partners trained on pathways out of poverty methodology by 2005 ; 2 Ugandan researchers trained in poverty mapping methods and GIS by 2005 ; 20 collaborators and government officials trained in the use of livelihoods assessment database and Acr explorer by 2006
2. Enabling access to innovation	Strengthen capacity and provide institutional change related to innovation systems	Curriculum for a training workshop on communicating livestock science to policy makers developed and tested in a pilot workshop by end of 2004 and used in 2 full workshops in Africa and Asia by end of 2005. ILRI and its partners have mainstreamed a process of reflection, reframing and use of lessons learned, during the research process that results in behaviour change, and improved performance leading to increased impact.
3. Improving market access	Strengthen capacity for analysis of options for market participation in developing countries	An integral part of virtually al the activities of the three operating projects of the Joint Programme, with monitorable indicators being the same as for output 4 on a programme-wide basis
4. Securing assets	Strengthen capacity in biotechnology for animal health and genetic improvement.	At least 10 NARS trained at MSc/PhD level in aspects of improved animal health and genetics/genomics technologies between

5. Sustaining lands and livelihoods

Strengthen capacity of key partner institutions, researchers, and community members to develop, test and support better strategies and options for sustainable land use and management by the poor in smallholder livestock systems

2003 and 2007; NARS scientists trained and facilitated to provide technical backstopping of active programmes for conservation and utilization of trypanotolerant livestock in four countries in West Africa

(Mali, Senegal, Gambia, Guinea) -Decision support tools for conservation of AnGR in four Asian countries developed and tested (proof of concept stage) by 2006.

-Demands for research information on land use change met in 25 pastoral communities in East Africa by end of 2005 -Natural resource databases distributed to at least 200 decision makers by 2006. -Five training courses conducted to build capacities for 5 institutions, 30 researchers and 20 policy makers to better manage land, livelihoods and biodiversity in East Africa by 2007.

6. Opportunities for Partnerships In Capacity Strengthening

6.1 Partnerships for capacity strengthening

The new ILRI strategy calls for an innovative and strategic approach in the selection of appropriate partners, considering recent changes in research paradigm, and the extension of ILRI's mandate into south Asia. ILRI has a global mandate, but has prioritized sub-Saharan Africa (SSA) and South Asia.

6.1.1 Suggested principles for choosing partners

Partnerships should be developed with research as well as development organizations with a research base, for desired impact in a reasonable time frame and according to the vision of ILRI. As an international CGIAR center, the mandate of ILRI is to deliver international public goods, therefore ILRI must now move its programme approach to the innovation systems mode. This move involves interactive learning and partnering with relevant institutions and individuals that are also involved in generating, diffusing, adapting and using new knowledge to address poverty reduction. Therefore, the partner organizations selected by ILRI should share the same vision as well as approach to livestock research. Selected partners should have some complementary competencies in research and/or livestock development (including aspects like socio-economics and environmental issues related to livestock production). It is suggested that organizations with competence and experience in farming systems, on-farm farmer participatory research and PRA techniques be chosen in addition to those having well developed research facilities. An additional factor is to choose organizations that will 'expand the capacity strengthening activities of ILRI' and strengthen other organizations. Thus some of the limitations of ILRI can be overcome and these partner organizations can complement ILRI in its effort to strengthen NARS and livestock development programmes.

6.1.2. Mechanism for developing partnerships and deciding areas of involvement

We discuss here establishing partnerships in India as an example to illustrate the elements that ILRI may wish to take into account in the choice of partners to achieve its CaSt objectives. India offers good prospects to develop meaningful partnerships to show impact since livestock development has emerged as a major tool in poverty alleviation programmes and there is a growing demand to make such programmes more effectively address the needs of livestock-dependent poor people.

It is suggested to initiate a dialogue between ILRI and the Indian Council for Agricultural Research (ICAR), the National Centre for Agricultural Economics and Policy Research (NCAP), a few selected research institutes, agricultural universities and development organizations to discuss areas of collaborative research in which ILRI can effectively contribute towards capacity strengthening and to have an impact on sustainable livelihoods for resource-poor livestock farmers. NCAP has analyzed livestock research programmes and published policy papers indicating research priorities and these reports can serve as a good base for discussion.

The dialogue may be in the form of brainstorming workshops organized initially at the ICAR headquarters, followed by a series of regional workshops (in regions chosen for involvement). Based on the outcome of these workshops, joint projects may be formulated, addressing

capacity strengthening needs of the organizations and development needs of the region. The projects should serve as effective demonstration of multidisciplinary and livelihood related approaches to research. Simultaneously, joint projects of technical nature may be developed with research institutes in areas where interest has been shown by ICAR, for example the development of vaccines and diagnostic aids. Research in livestock extension and the development of extension and training material is another area where ILRI can make useful contribution in India.

The operation of an umbrella Memorandum of Understanding (MOU) with the National Dairy Development Board (NDDB) and the ICAR would be a first step in the right direction. However, the MOU with the ICAR should be carefully formulated to offer :

- flexibility of choosing partner organizations and programmes in line with the agenda and mandate of ILRI and in consultation with the ICAR and other NARS partners.
- sufficiently long period in order to have meaningful involvement with NARS partners.
- scope for separate MOUs for specific programmes/projects with selected organizations (ICAR institutes and Universities), specifying details of activities, roles and responsibilities of each organization (keeping in view CaSt activities).
- from the capacity strengthening objective, a desirable approach is to jointly formulate projects/programmes, which include systems and participatory approach, gender and environmental issues and are focused on needs/constraints of the resource-poor livestock farmers. Such approach will provide hands-on experience and ample opportunities for orientation and training. It would be most desirable to involve Non-Governmental Organizations (NGO), sociologists and innovation systems experts as consultants in such projects (Indo-Dutch Biocon Project of the ICAR is a good example).

Amongst ICAR and other research-based organizations, partnerships with NCAP should be preferred as it would help in clear understanding and influencing research policies.

It is suggested that some of the international organizations such as Swiss Development Cooperation, the Department for International Development (DFID), the Australian Centre for International Agricultural Research (ACIAR), Aga Khan Foundation, Ford Foundation that are interested in supporting development research and capacity strengthening, may be approached for funding support. For technical projects funding can be secured through National Agencies like Department of Biotechnology, Council of Scientific and Industrial Research and the ICAR.

6.2 Emerging Opportunities

The shift in ILRI's research paradigm aims to contribute to poverty reduction through promoting innovations that directly affect the lives and well being of resource poor small holder producers and pastoralists through maintaining strength in mixed cropping-livestock systems and increasing market oriented activities. To achieve these objectives, ILRI has identified a diverse range of institutional partnerships, listed in the MTP 20052007, which involve engagements with appropriate stakeholders and partners to conduct research that is demand-driven and impact oriented. Furthermore, this new research focus demands new kinds of collaborative arrangements that exploit a wider range of opportunities that currently exist in the international agricultural development and poverty reduction arena.

Current initiatives for agricultural development in Africa, as elaborated in the New Partnership for Africa's Development (NEPAD) Comprehensive African Agricultural Development

Programme, (CAADP) focus attention on promoting a move away from agricultural research aimed at generating technologies and publications only, to effectively addressing the priority problems of resource poor small holder producers. Research organizations will thus have to become more flexible to the diverse and dynamic needs of small holder farmers to achieve the desired impact at the beneficiary levels. The NEPAD/CAADP initiative emphasizes the need to build, through appropriate partnerships, national capacities of researchers and change agents to promote this new trend in agricultural research for development. Accordingly, the NEPAD programme aims to strengthen NARS capacities in agricultural research which incorporate appropriate key elements including sustainable use of genetic resources, policy research, biotechnology and information technology, technology dissemination and farm-level impact assessment.

NEPAD/CAADP programmes are operated through collaborative partnership arrangements between FARA, the CGIAR centers such as ILRI, national programme members of the sub-regional organizations (SROs), the Association for Strengthening Agricultural Research in Eastern and Southern Africa (ASARECA), and the Conseil Ouest et Centre Africain pour la Recherche et le Developpement Agricoles (CORAF/WECARD) with the involvement of regional economic communities (RECs), namely Common Market of Eastern and Southern Africa (COMESA), and the Economic Community of West African States (ECOWAS). Other collaborators in the NEPAD/CAADP programme include a wide range of advanced research institutions (ARIs), Non-governmental Organizations (NGOs), farmer-based organizations (FBOs) and farmer groups, the private sector, national agricultural research and extension systems as well as tertiary educational and training institutions. The NEPAD and other initiatives, such as FARA programmes, therefore offer new opportunities for ILRI to establish functional partnerships that will promote capacity building and strengthening and thus enable ILRI to achieve its strategic objectives. The main programmes that offer opportunities for capacity strengthening interventions from ILRI include the following:

- Building African Scientific and Institutional Capacity (BASIC) of FARA . BASIC is a tripartite partnership between Africa universities, European educational institutions, represented by ICRA and NATURA, the network of 35 European universities and the CGIAR. The aim of BASIC is to strengthen the capacity of African research and development professionals to design and implement collaborative research for development activities that respond to the needs of clients and beneficiaries with a view to improving the livelihoods of the rural poor. BASIC will also address the urgent need to revitalize agricultural training and strengthen institutional capacities of higher learning in agriculture and rural development. In other words, BASIC programmes offer opportunities in the context of “building capacity to build capacities”, i.e targeted strengthening of agricultural education institutions to build the capacities that students need in research for development in livestock-mediated poverty reduction. ILRI's intervention in the BASIC programme will include the wider use of the excellent training, teaching materials and resources already developed by ILRI to support institutional capacity strengthening in the teaching of agricultural sciences in African universities.
- SSA-CP and MAPP programmes - The Sub-Saharan Africa Challenge programme, (SSA-CP), and the Multi-country Agricultural Productivity Programme, MAPP of FARA encourage collaborative agricultural research efforts by the NARS working through the SROs. The competitive research grants schemes in these programmes, open up new opportunities for ILRI to work with national programme partners to strengthen capacities in the preparation of award winning research grant proposals and implementation of collaborative direct impact-oriented research for the benefit of livestock-dependent poor people.

- Global Open Agriculture and Food University (GO-AFU) provides opportunities for the development and production of appropriate teaching and resource materials based on ILRI's existing training resources and materials which can be fed into the programme for distance learning in the GO-AFU.
- The ICRA Global partnership strategy – This strategy aims to strengthen the capability of educational institutions in developing countries to provide hands-on training in managing rural innovation systems with the participation of a broad range of research and development partners across sectors and scales. Strategic collaboration with this ICRA programme, is an opportunity for ILRI's research themes to strengthen their capacities jointly with those of their partners in innovation systems approaches to agricultural research for development leading to livestock-mediated poverty reduction. Through collaboration with this ICRA programme, ILRI and partners can also contribute to strengthening educational institutions. ICRA's strategy puts a strong emphasis on sub-Saharan Africa. This could be operationalised by establishing joint partnerships in the countries where both ICRA and ILRI are active and using these partnerships to jointly strengthen the capacity of educational institutions to strengthen capacities in applying innovation systems approaches. CaSt activities could be organized around interactive learning experiences in the innovation process in which ILRI and partners are involved (hands-on learning by doing) and lessons learned from these. CaSt could target both current professionals and students in the innovations systems.
- Biosciences Eastern and Central Africa (BECA) – the goal of this platform is to “apply bioscience research expertise to produce technologies that target poor farmers to improve their productivity”. Based at ILRI, Nairobi, this facility offers the opportunity for ILRI to strengthen the capacities of African scientists in the application of biosciences to improve the productivity of resource poor livestock producers.
- Regional Agricultural Information Network, RAIN – the strategic objective of RAIN, which is one of the 17 regional networks coordinated by ASARECA, is to enhance access to and utilization of information for regional agricultural research and development. The goal is to promote the provision and sustainable management of client-oriented agricultural information throughout eastern and central Africa. Emphasis is to strengthen regional capacities to access, generate, exchange, package, disseminate and use information for economic growth. RAIN offers ILRI, through appropriate partnerships, an information management platform to strengthen African regional capacities in information and communications management and the sharing of information in the adoption and use of the innovation systems approach. Using its modern and advanced ICT facilities and expertise, ILRI can strengthen capacities of NARS partners in information and knowledge management exploiting ILRI's comparative advantage and experience of new developments in this area.
- CGIAR Centers - the location of certain CGIAR centers at ILRI, namely IFPRI/ISNAR, IWMI, and CIAT should be fully exploited, through joint programmes, to complement efforts at internal institutional capacity strengthening at ILRI and for NARS partners.

6.3 Guiding principles and methods

Partnerships and capacity strengthening activities should be meaningful, “value-adding” and mutually beneficial so as to widen the scope and make ILRI’s research delivery systems more effective. But the range of partners and the types of partnerships desired, as specified in the MTP, is so wide that it is useful for ILRI to establish a set of criteria to exploit the opportunities for collaborative capacity strengthening. The panel suggests the following guiding principles and methods for collaborative capacity strengthening partnerships

- Targeting a limited and manageable number of partner organisations.
- Building partnerships around opportunities or problems that are jointly recognized by the partners and have significant priority for them.
- Diversity of partners so as to cover all partners that are essential for impact in terms of livestock-mediated poverty reduction.
- Sufficient duration to achieve the objectives that inspired the collective action of the partners, after which the partnership will disband or be re-constituted to adjust to new needs.
- Clear planning and task division, clear commitment to task, good management and recognition of the need to build trust.
- Selection of partners on the basis of criteria derived from a list of institutional and individual capacities needed for the new ILRI strategy and research paradigm.
- Consistency with ILRI’s new vision and strategy so that capacity strengthening activities can effectively contribute to ILRI’s research agenda and capabilities.
- Shared vision and programme objectives to ensure that the capacity strengthening activities are directed to achieve the same goals.
- Equal partnership, and a move towards the concept of “building capacity to build capacities” to achieve sustainability.
- Strengthening ILRI’s institutional capacity to facilitate implementation of collaborative programmes with partners and responding to the new challenges through changes in research approach and mindsets.
- Partnerships built on the basis of comparative advantage and complementarity to optimize resource use and expertise of the partners.
- Partnerships that foster a culture of innovation, interactive learning and change, developing and enhancing individual awareness, knowledge and skills in a supportive external environment.

Methods

- identify and target capacity strengthening opportunities in regional and sub-regional organizations and programmes.
- Undertake detailed surveys of the strengths and weaknesses of potential partners, as well as ILRI, in order to determine the nature of the capacity strengthening partnerships. A rapid assessment approach and mainstreaming of the survey process will maintain close linkages between ILRI and its range of partners and stakeholders which will include NARS, the public and private sector and tertiary agricultural education and training institutions.
- Conduct a rapid needs assessment of the capacity strengthening needs of stakeholders and the broad range of identified ILRI partners with the purpose of setting up a process/mechanism that facilitates continuous dialogue to remain relevant, flexible and

responsive in order to keep abreast with developments and changing needs in the agricultural sector.

- Based on the outcome of the survey, establish formal partnerships with Memoranda of Understanding and Letters of Agreements which outline details on specific programme activities, with clearly defined responsibilities, time-phased targets and outputs.
- Formulate an ILRI CaSt Strategy that will address the needs for institutional and individual capacity strengthening of ILRI and its partners.

7. Recommendations

Following exhaustive considerations of the issues addressed during this review, and taking into account the important need for an effective capacity strengthening strategy that ILRI now requires to meet its goal of reducing poverty and making sustainable development possible for poor livestock keepers, the panel makes the following recommendations.

Recommendation 1. Managing the new ILRI programme strategy

ILRI's new strategy implies a paradigm change requiring new knowledge, skills and mindsets (social sciences, innovation systems approaches and soft skills). These approaches may be entirely new to many staff and partners with specific implications for an internal ILRI capacity strengthening effort requiring strong support from management. Opportunities should be provided to ILRI staff to acquire new soft skills for facilitation of multi-stakeholder innovation processes, communication, facilitation, negotiation, conflict management, teamwork, planning, systems thinking as well as social scientists with practical grasp of policy analysis as well as livelihood and gender analysis. The panel recommends the initiation of CaSt activities to promote internal understanding of the issues of sustainable livelihoods and poverty and their implications for research planning and implementation. ISNAR which is now physically located at ILRI Addis Ababa, and other agencies, such as ICRA, have developed a series of highly relevant learning modules on these aspects which ILRI can immediately access and through the proposed ILRI/ISNAR/ICRA collaboration.

Recommendation 2. Develop an ILRI CaSt Policy and Strategy

According to ILRI's Strategy to 2010, the guiding principle relating to capacity strengthening states as follows: *Strengthening the capacity of ILRI and its partners to contribute to the identified research themes. This will extend beyond running courses and training students to innovative training activities and research partnerships.*

ILRI's NARS partners expect increased and more diverse assistance from ILRI for individual and institutional capacity strengthening. New opportunities are currently available for strategic collaboration with national, sub-regional and international partners for capacity building and these developments demand a new and expanded role for the CaSt Unit.

To facilitate the functioning of this Unit, a clearly defined ILRI CaSt Policy and Strategy is required. The ILRI CaSt policy should address the institutional capacity strengthening needs of ILRI and its partners in order to achieve common goals.

The policy should also give clear guidelines about coordination of capacity strengthening activities outlined in the MTP, establish effective linkages and collaboration with the Human Resources Unit and the project activities of the five research themes.

A re-organized and strengthened ILRI Capacity Strengthening Unit should thus be established with its own, albeit integrated portfolio of activities to operationalise these matters.

Recommendation 3. Establish pro-active and expanded CaSt activities

The re-organized CaSt Unit should maintain its current functions but also extensively expand its activities so that rather than being a spin-off of researcher participation, CaSt plays a more proactive and strategic role as an activity in its own right, with its own strategic objectives. CaSt Unit activities should be designed in two directions.

First through research participation and short courses (including the development of training materials). The content may change, focusing more attention on new methodologies needed for the new research paradigm.

Secondly to design activities to give more structured support to strengthen the capacity of educational institutions thereby building capacity to build capacity for research and development leading to livestock-mediated poverty reduction.

We recommend a strengthened CaSt Unit embedded within the Research Theme 2 with its own programmes and budget. The following staffing structure and general terms of reference are recommended.

Staffing structure:

CaSt Manager 1 – Head of the CaSt Unit

Training Administrator 1

Professional Trainer with a background in social sciences and with experience in training in livestock research and development

Bilingual Secretary 1

Office Assistant 1

General Terms of reference

- Supervise the implement the CaSt Policy and Strategy and develop capacity strengthening guidelines to ensure that CaSt activities are fully integrated with the programmes of the five research themes
- Prepare the annual CaSt Work plan and budget, in consultation with the Research Themes and the Human Resources Unit
- Undertake assessment of the internal capacity strengthening needs of ILRI and of selected NARS partners.
- Design and implement collaborative capacity building programmes with ILRI's partners to ensure that the capacity building activities are consistent with the needs of ILRI's partners and adopt the concept of building capacity to build capacities, including training management capacities.
- Organize regular technical consultations on capacity building programmes with ILRI partners, including universities, national agricultural research systems, NGOs, FBO's, FARA and regional and sub-regional organizations as well as the private sector.
- Compile and publish databases of ILRI trainees and design trainee follow up programmes to ensure that the knowledge and skills acquired through ILRI capacity

building programmes are making the desired impact on livestock development and livestock mediated poverty reduction.

- Prepare and publish training resources materials in collaboration with ILRI national programme partners.
- Prepare annual reports of CaSt activities.

We further recommend that ILRI may seek funding for the CaSt programmes from international foundations such as the Bill Gates Foundation, Ford Foundation, Rockefeller Foundation, Aga Khan Foundation, Gatsby Foundation and Kirkhouse Foundation as well as through collaborative national, regional and sub-regional projects within the NEPAD and FARA programmes

Recommendation 4. Partnerships

ILRI's new strategy calls for more formalized joint development of projects with a broader range of partners and stakeholders, including GOs, NGOs, SROs, farmers organizations, agricultural training institutions, the private sector agencies and consumers. The MTP presents a formidable list of partners and the panel is of the view that any attempt to establish collaboration with such a large group of partners may dilute ILRI's efforts and diminish the chances of making the desired impact. We therefore recommend that ILRI adopts a carefully designed strategic approach to the selection of partners in order to achieve ILRI's goals and desired impact. Partnerships and alliances should be maintained only for as long as the relationships are mutually beneficial to ILRI and the partners.

8. Implementation Process for Recommendations

Assuming that ILRI management endorses our findings, the following process would facilitate implementation of our recommendations.

1. ILRI should appoint a small implementation committee consisting mainly of internal ILRI staff, but with inputs from a few external members.
2. The Terms of Reference of the implementation committee should be carefully formulated to include the following tasks.
 - preparation of an ILRI CaSt Policy and Strategy
 - Obtain feed-back from outsiders (potential partners)
 - elaboration of a flexible implementation plan for the CaSt strategy, with responsibilities and a work plan for the CaSt Unit.
 - formulation of the structure and staff composition of a strengthened CaSt Unit capable of performing the tasks elaborated in the work plan.
 - development of a management structure and linkages between the CaSt Unit and the five ILRI research themes and pattern of work with ILRI's partners.
 - advise on a funds mobilization strategy to support ILRI's capacity strengthening activities.
3. Develop a specific CaSt Strategy and programme to enhance the capacity of ILRI staff to conduct research and to strengthen the capacities that directly lead to livestock-mediated poverty reduction.
4. Establish a process to identify appropriate partners with which ILRI should develop collaborative projects in research and capacity strengthening.
 - Guidelines, methods and selection criteria for partners (see section 5.3)
 - Work out principles and modalities for collaboration with each of the different partners
 - Recognize the specific roles of educational institutions/partners
 - Indicate whose and how capacities will be strengthened.

9. Annexes

Annex 1. Documents consulted in the preparation of this report

- ILRI: Livestock a pathway out of poverty; ILRI's Strategy to 2010 International Livestock Research Institute, Addis Ababa pp 24
- ILRI : International Livestock Research Institute: Medium-Term Plan 2005–2007
- Comprehensive Africa Agriculture Development Programme New Partnership for Africa's Development, AU/NEPAD July 2003. pp 102
- The CGIAR Initiative for a Global Open Agriculture and Food University CGIAR, August 2004. pp 38
- Biosciences eastern and central Africa Brochure. pp 8
- Building Africa Scientific and Institutional Capacity BASIC– project proposal FARA Accra Ghana 2004. pp 39.
- David R MacKenzie, Menwuyellet Moussie and Aart van Schoonhoven. Center Commissioned External Review (CCER) ILRI Facilities in Ethiopia ILRI February 2002. pp 33
- Training Policy and Procedures Manual ILRI August 1996. pp 60
- Evaluating the impact of the graduate fellowship programme of the International Livestock Institute. ILRI 2002. pp 64
- ILRI Training Programmes ILRI website. pp 3

Annex 2. Members of the CCER review panel

Anthony Youdeowei

Anthony Youdeowei was Professor of Agricultural Entomology at the Faculty of Agriculture and Forestry, University of Ibadan, Nigeria, from 1973 to 1990. Later he was Director of Training and Communications at the West Africa Rice Development Association, WARDA, an international agricultural research centre of the CGIAR based in Bouake Cote d'Ivoire. In 1997, he left WARDA to establish as an international consultant and the Managing Consultant for *IMPACT-Afrika*, a human resources development and capacity building facility for sustainable human development in Africa. Anthony is a specialist in integrated production and pest management, farmer field schools and has developed interest and competence in agricultural education, training and scientific communication. Currently, Anthony advises African Governments, the Food and Agriculture Organization of the United Nations, FAO, the World Bank, Africa Region, GTZ , and other development agencies on integrated production and pest management policies, planning and field implementation of IPPM field training programmes. He is a member of the International Expert Advisory Group, that advises the Shell Petroleum Development Company Plc, of Nigeria on rural community development in the Niger Delta. Anthony is also consultant to CTA in The Netherlands in training, development and production of training and agricultural extension materials and agricultural communication issues. Anthony is the author of several books on agricultural education, integrated pest management and plant protection extension and training. He has also written several science books for children.

Datta Rangneker

Datta Rangnekar is an Animal Production specialist with more than three decades of experience in planning, implementing pro-poor integrated rural development programmes with a Non-governmental organization in India. He has worked as principal scientist of a number of research and extension projects funded by national and international agencies. He was on the scientific panel of the Indian Council of Agricultural Research for 15 years. He was associated as consultant for international organizations like FAO, Winrock International and Natural Resources International. He was consultant to the National Dairy Development Board of India from 2000 to 2004. Currently he is a freelance consultant in livestock development issues, capacity building and research for development issues.

Jon Danne

Jon Daane has worked in various capacities for Wageningen University and Research center (WUR) from 1973 to 1991. Most of this time, he was posted abroad in interuniversity collaboration projects involving universities in South-East Asia and West Africa and aimed at strengthening agricultural education and research for development. From 1983 to 1991, he coordinated a collaboration programme between three Dutch universities and the Faculty of Agricultural Sciences of the National University of Benin. During this time, he was Professor of Rural Development Sociology at the Faculty. From 1992, Jon is Director of the International Centre for development oriented Research in Agriculture, ICRA based in Wageningen, The Netherlands and Montpellier, France. Two major themes run through Jon's career: integrating social and natural sciences in agricultural university education and stimulating faculty and students to go out and work with other players in rural R&D. Throughout his professional life, Jon has worked in interdisciplinary teams and promoted interdisciplinary education aimed at enhancing the relevance of science for rural development of the resource poor.

Annex 3. Terms of Reference

1. Briefly reflect on and analyse the evolution of ILRI's capacity building activities to date
2. Advise on required changes in ILRI's CaSt roles to make them consistent with ILRI's mandate and revised strategy:
 - Assess implications for the function and types of ILRI's CaSt activities;
 - Evaluate the institutional processes currently in place to support such activities [CaSt] activities and the integration with the five ILRI research themes;
 - Propose additional institutional changes / processes / the institutional environment required to support this (including a strategy to embed interactive learning and reflection as an integral part of ILRI research themes; and the additional capacity and skills required at staff level).
3. Based on (2) identify a set of guiding principles and methods for innovative capacity strengthening activities in support of livestock-mediated poverty reduction that:
 - takes full account of ILRI's comparative advantage;
 - dovetails with ILRI's (research) partnership needs and responds to ILRI's and its client's needs;
 - responds to the new opportunities provided by the development of new initiatives (BASIC, Global open University etc.) and ensures complementarity and appropriate linkages with other CaSt providers (including other CG centers);

- dovetails with development in ROs and SROs in SSA and Asia and identifies donor and partnership opportunities for implementing and funding different types of capacity strengthening activities;
 - takes advantage of recent developments in information and communication technologies and knowledge management methods;
 - takes into account options for the development and production of appropriate training resources and materials with partners (e.g. university and college degree and non-degree courses, short courses, distance learning).
- Briefly reflect on how best to implement the proposed new CaSt strategies

Annex 4. Work programme and list of persons encountered

Monday 04 October 2004

1. Dr Jeroen Dijkman,
Director Theme 2
ILRI
2. Dr Yilma Jobre,
A/ Manager, CaSt,
ILRI
3. Richard Fulss,
Information Manager,
ILRI
4. Dr Dirk Hoeksta,
Project Manager,
IPMS-ILRI
5. Dr Azage Tegegne,
Agriculture Development Specialist,
IPMS-ILRI
6. Dr Berhanu Gebremedhin,
Agriculture Policy and Institutions Specialist,
IPMS-ILRI
7. Ms Mekdim Ketsela,
Assistant to the Director,
Theme 2

Tuesday 05 October 2004

1. Dr Ephream,
Representative,
Vice President for Graduate Studies
Addis Ababa University
Tel. 239756/239742
2. Dr Araya Asfaw,
Dean, Faculty of Science (FoS),
Addis Ababa University (AAU)
3. Dr Assefa Mebrate,
Associate Dean,
Graduate Programs and Research, FoS/AAU

4. Dr Dagne Kifle,
Head, Department of Biology, FoS/AAU
5. Dr Gizachew Alemayehu,
Head, Department of Chemistry, FoS/AAU
6. Dr Shirley Tarawali Director,
Theme 5 ILRI
7. ILRI Graduate Fellows (PhD, M.Sc) located in Ethiopia

Wednesday 06 October 2004

Discussion with Drs Jeroen Dijkman and Yilma Jobre

Travel to Nairobi

Thursday 07 October 2004

1. Ms. Veyrl Adell,
ILRI, Nairobi
2. Dr. Lillian Kimani,
KARI
3. Dr. Helga Recke,
Programme Coordinator,
EU/KARI
4. Dr. Mwai Okeyo,
ILRI, Nairobi
5. Dr. Evans Taracha,
ILRI, Nairobi
6. Dr. Richard Bishop,
ILRI, Nairobi
7. Dr. Duncan Mwangi,
ILRI, Nairobi
8. Dr. Olivier Hanotte,
ILRI, Nairobi
9. Mr. Fuad Iraqi,
ILRI, Nairobi
10. Dr. Abdulahi Adam,
ILRI, Nairobi
11. Dr. Rogers Stern,
ILRI, Nairobi
12. Mr. D. Mamadou,
ILRI, Nairobi
13. Dr. Ade Freeman,
Director,
Theme 1 ILRI
14. Boniface Nyamori,
KARI
15. Simon Kuria,
KARI
16. William Munene,
KARI

17. Dr. Dannie Romney,
ILRI, Nairobi
18. Dr. Thomas Fitz Randolph,
ILRI, Nairobi
19. Dr. Steve Staal,
ILRI, Nairobi
20. Dr. Amos Omore,
ILRI, Nairobi
21. Dr. Mario Herrero,
ILRI, Nairobi

Friday 08 October 2004

1. Prof. Wallace Bulimo,
Lecturer, Dept. of Biochemistry,
College of Health Sciences,
University of Nairobi
2. R. Kinyanjui,
University of Nairobi
3. Victor Mobegi,
Graduate Fellow,
University of Nairobi
4. Francis Mulaa,
Senior Lecturer,
University of Nairobi
5. Dr. John Thnita
6. Richard Kangethe
7. Dr. Grace Murilla (Represented by S. O. Nyamwaro),
Director, Trypanosomiasis Research center,
KARI, MUGUGA
8. Mr. Bernard Bett,
Graduate Fellow
9. Mr. Patrick Irungu,
Graduate Fellow
10. Ms. Susan MacMillan,
Head of Public Awareness,
ILRI, Nairobi
11. Dr. Edward Okoth,
ILRI, Nairobi
12. Dr. Tom Randolph,
ILRI, Nairobi
13. ILRI-Nairobi Graduate Fellows
14. Dr. Carlos Sere,
DG-ILRI
15. Dr. John McDermott,
DDG (R) – ILRI

Saturday 09 October 2004

Meet with CaST Staff at ILRI-Ethiopia

1. Dr Yilma Jobre
2. Mrs. Tigist Mamo
3. Mr Emaelaf Kebede

Sunday 10 October 2004

Free

Monday 11 October 2004

1. Dr Belay Kassa, Teleconference,
Vice President,
Alemaya University, Ethiopia
2. Dr Gete Zeleke Teleconference,
Amhara Region Agricultural Research Institute (ARARI),
Bahir Dar,
Ethiopia Tel: 251 08
3. Mr Bruce Scott,
Director,
Partnership and Communications ILRI
4. Dr Aberra Deressa,
Deputy Director General Ethiopian Agricultural Research Organization (EARO)
5. Dr Ralph Roothaert,
Scientist,
Participatory Research and Livestock Innovations CIAT-ILRI Addis Ababa,
Ethiopia
6. Dr Eyasu Elias,
Country Representative,
ICRAF,
Addis Ababa,
Ethiopia

Tuesday 12 October 2004

1. Dr Mohammad A. Jabbar,
Senior Agricultural Economist and Project Leader,
Theme 3, ILRI, Addis Ababa, Ethiopia
2. Dr. Margret Nabasiye, Teleconference,
Deputy Dean,
Research Faculty of Agriculture,
Makarere University,
Tel. 256-41-540707.
3. Denis Mpairwe, Teleconference,
Faculty of Agriculture,
Makarere University Tel. 256-41-540707.

4. Meet with Communication Focal Point and SDC members— Mrs Elizabeth Getachew Mr Ephrem Getahun Sr Senait Mekbib
5. Krishna Prasad Scientist, IMWI, Addis Ababa, Ethiopia
6. Dr Saidou Tembely, Teleconference,
Directeur Général Laboratoire Central Vétérinaire BP 2295 Bamako,
Mali Tel.: (223) 224 33 44 Mobile (223) 671 27 28 Fax (223) 224 98 09
7. Franca Zenete,
IFPRI-ISNAR,
Addis Ababa,
Ethiopia
8. Cristina Sette,
IFPRI-ISNAR,
Addis Ababa,
Ethiopia
9. Jon Daane,
ILRI CaSt CCER panel member,
Teleconference ICRA, Tel. 31-317 422 938
10. Dr Jeroen Dijkman,
Director,
Theme 2 Teleconference

Wednesday 13 October 2004

1. Dr Berhe Gebre-Egziabeher,
General Manager,
National Veterinary Institute,
Debre Zeit, Ethiopia
2. Mr Asfaw Yimegnuhal,
Acting Manager,
Debre Zeit Research Station,
ILRI, Ethiopia
3. Mr Abate Tedla,
Scientist,
Forage Genetic Resources,
Debre Zeit Research Station,
ILRI, Ethiopia
4. Dr Jeroen Dijkman,
Director,
Theme 2 Teleconference

Thursday 14 October 2004

1. Prof. Lusato R. Kurwijila Sokoine,
Agricultural University Consultant,
Theme 3, ILRI
2. Jon Daane,
ILRI CaSt CCER panel member,
Teleconference ICRA,
Tel. 31-317 422 938

3. Dr Jeroen Dijkman,
Director,
Theme 2 Teleconference

Friday 15 October 2004

1. Jon R V Daane,
ILRI CaSt CCER panel member,
Teleconference ICRA,
Tel. 31-317 422 938

Saturday 16 October 2004

Departure

Annex 5. ILRI Training summary report from 1990–September 2004

Annex table 5.1. Post-graduate degree trainees (Graduate Fellows)

Year	M	MSc F	PhD M F		Total MSc PhD		Grand Total
1990	2	-	6	1	2	7	9
1991	3	-	11	1	3	12	15
1992	2	1	14	4	3	20*	23
1993	6	2	3	0	8	3	11
1994	7	0	8	1	7	9	16
1995	6	0	12	3	6	15	21
1996	4	2	14	0	6	14	20
1997	3	3	7	3	6	10	16
1998	8	3	11	7	11	18	29
1999	6	3	9	5	9	14	23
2000	9	4	13	10	13	23	36
2001	6	2	6	5	8	11	19
2002	7	4	8	3	11	11	22
2003	13	3	5	3	16	8	24
2004	11	6	6	7	17	13	31
Total	93	33	133	53	126	186	315

- Gender not known for two PhD GFs

Annex Table 5.2 Non-degree trainees (Attachment associates; student associates; technical associates)

Year	M	F	Total	Remark
1990	-	-	-	
1991	-	-	-	
1992	-	-	-	
1993	-	1	1	
1994	3	1	4	
1995	10	2	12	
1996	21	3	24	
1997	4	1	5	
1998	36	16	52	* 2 gender not identified
1999	5	2	7	
2000	37	22	59	
2001	33	19	52	
2002	28	19	47	
2003	61	45	106	
2004	34	34	68	
Total	272	165		
		Grand total	437	

Annex table 5.3 Participants at ILRI's Group training courses

Year	M	F	Total
1990	-	-	-
1991	25	2	27
1992	-	-	-
1993	-	-	-
1994	3	33	36
1995	15	9	24
1996	4	3	7
1997	23	4	27
1998	6	5	11
1999	-	-	-
2000	18	2	20
2001	55	7	62
2002	155	13	168
2003	99	28	127
2004	82	19	101

Total	485	125	
		Grand total	610

Annex table 5.4 Group training course topics

No	Group Course Name	No
1	Diagnostics for Trypanosomiasis	17
2	Improving Cattle Traction, Milk and Meat Production in Africa	25
3	Tick Borne Disease Diagnostics	7
4	The Use of Recombinant DNA in Diagnosis	12
5	Diagnosis of Tick-borne Disease Using ELISA Technology	6
6	Ruminant Nutrition and Feeding Systems	14
7	Capacity Building for Sustainable use of Animal Genetic Resources In Developing Countries.	58
8	Forage Seed Production	18
9	Dairy Technology	55
10	Near Infrared Spectrophotometer	16
11	Feed Resources and Forage Seed Production	10
12	SPSS and Data Management	46
13	Dairy Technology and Marketing	67
14	Management of Agricultural, Scientific Journals	11
15	Introductory biometrics using SAS	14
16	Milk hygiene and processing	26
17	Facilitating community-based participatory monitoring and evaluation systems	30
18	Participatory research concepts and methods	22
19	On-farm forage	55
20	Milk hygiene processing and forage evaluation	24
21	Animal husbandry and health	59
22	Milk hygiene and processing	18
	Total	610

Annex 6. IWMI Capacity building policy and strategy

(Source : IWMI website)

IWMI's capacity efforts to date have centered on IWMI Ph.D. Scholarship and Post Doctoral Fellowship programs[1], and on a collaborative approach to our research projects involving young people and researchers from the South.

The capacity building scope expands under this strategy to include exploring options for translating our research into a form suitable for different users – policy makers, development

organizations and field level information. Here, the approach is to work identify specialist partners or networks who can advise or implement these activities.

Beginning 2002, IWMI has invested heavily in programs and initiatives to improve staff skills and broaden perspectives. These include soft skills training for staff across the institute; ranging from presentation skills to facilitation and negotiation and project management. The Leadership Development program is an intensive activity for a group of IWMI's high potential staff members (see professional development). , touching some 50 people across the organization - match experienced staff with younger colleagues in a skill-building partnerships. And a number of technical training, team building and on-request courses have been organized.

Capacity building programs help us meet our goals of realizing a network-based approach to collaborative research and expanding the role of Southern researchers in our research efforts. Our capacity building efforts will include:

- Ph.D. Scholarship Program
- Post-doctoral Fellowship Program
- Visiting Scientist Program,
- Capacity building of professionals through dissemination of IWMI research knowledge and curriculum development
- Policy roundtables and policy briefs
- Institutional capacity building for NARES Partners
- Workshops and seminars conducted as part of our research projects.

	Capacity Building Targets
Capacity Building Program	Target
Ph.D. Scholarship Program	8-10 Ph.D. Fellows per year from developing countries over the next five years; Co-supervision of at least 5 Ph.D. students with both SEMnet and Waternet
Postdoctoral Fellowship Program	Approx. 15 Post Doc Fellows from developing countries at any given time of the year
Visiting Scientist Program	Gradual increase of the total number to reach 10 Visiting Scientists per year over the next five year period;
Capacity Building of Professionals	Contribute 10 cases to the GWP toolbox; Contribute inputs to at least 4 curriculum modules of Waternet IWRM MSc course
Policy Roundtables and Policy Briefs	Average of 4 to 5 Policy Roundtables per year Average of 6 Policy Briefs per year
Institutional Capacity Building for NARES Partners	1 Proposal Writing workshops per year
Workshops and Seminars	

Annex 7. ILRI Training and resource materials

Source : ILRI website

- Roles of visuals in scientific presentations
- Speaking at scientific meetings: Organizing the message

- Speaking at scientific meetings: Oral presentation techniques
- Diagnosis of heat and pregnancy in cows
- Diseases of economic importance in small ruminants in sub-Saharan Africa
- Feed resources for ruminant livestock
- An introduction to milk: RDP Module 1
- Milk processing techniques—Sour milk
- Milk processing techniques—Fermented milks
- Milk processing techniques—Processing fresh milk into cheese
- Livestock policy analysis
- Seed processing—Audiovisual training module
- Tropical forage seed production training module

Downloadable training materials in pdf format

- Traditional cheese making manual (949 KB)
- Feed evaluation (272 KB)
- Methods for the evaluation of forage legumes, grasses and fodder trees for use as livestock feed (457 KB)
- Rural dairy technology (1,967 KB)
- Forage seed production (896 KB)
- Small ruminant production techniques (1,458 KB)